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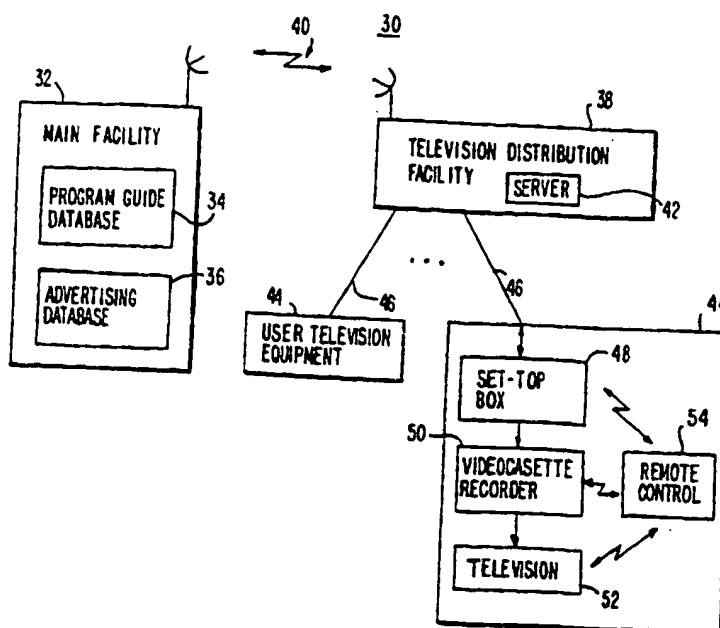
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## (57) Abstract

An interactive television program guide system is provided in which targeted advertisements may be presented to a user and targeted actions taken in the program guide based on the user's interests. The program guide monitors the user's interactions with the program guide to determine the user's interests. Interactions that may be monitored include interactions that indicate the categories of programming that interest the user (e.g., movies, sports, children's programming, etc.), setting a reminder for a program, purchasing a program, requesting information on a program, browsing program listings for a particular time or channel, etc.

## PROGRAM GUIDE SYSTEM WITH TARGETED ADVERTISING

Background of the Invention

This invention relates to interactive television program guides, and more particularly, to  
5 techniques for presenting targeted advertising to users of such television program guides.

Cable, satellite, and broadcast television systems provide viewers with a large number of television channels. Viewers have traditionally  
10 consulted printed television program schedules to determine the programs being broadcast at a particular time. More recently, interactive electronic television program guides have been developed that allow television program information to be displayed on a  
15 viewer's television.

Interactive program guides are typically implemented on set-top boxes. Such program guides allow users to view television program listings in different display formats. For example, a user may  
20 instruct the program guide to display a grid of program listings organized in a channel-ordered or a time-ordered list. Users may also search and sort program

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It is also an object of the invention to provide an arrangement for monitoring the effectiveness of targeted advertisements and targeted program guide actions.

5 Summary of the Invention

These and other objects of the invention are accomplished in accordance with the principles of the present invention by providing a system having an interactive television program guide that monitors the  
10 user's interactions with the program guide to determine the user's interests. The program guide may display targeted advertising or take a targeted action in the program guide based on this determination of the user's interests.

15 Targeted advertisements may contain text, graphics, or video. Targeted advertisements may also be active objects containing various user-selectable options. For example, a targeted advertisement may allow the user to request that additional information  
20 on a product be mailed to the user's home, may allow the user to purchase a product, or may allow the user to view additional information on a product using the program guide.

Targeted actions that may be taken in the  
25 program guide include setting program reminders and offering a pay-per-view program for purchase. For example, if the program guide determines that the user is interested in sports programming, the program guide may automatically set a program reminder for a  
30 particular sports program. Alternatively, the program guide could provide the user with an opportunity to set

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advertising or taking a targeted action in the program guide in accordance with the present invention.

FIG. 4 is a depiction of an illustrative screen for a browse feature in accordance with the  
5 present invention.

FIG. 5 is a depiction of an illustrative set reminder screen in accordance with the present invention.

FIG. 6 is a depiction of an illustrative  
10 reminder screen in accordance with the present invention.

FIG. 7 is a depiction of an illustrative by time program listings screen in accordance with the present invention.

FIG. 8 is a depiction of an illustrative  
15 ~~select start time screen in accordance with the present~~  
invention.

FIG. 9 is a depiction of an illustrative order review screen in accordance with the present  
20 invention.

FIG. 10 is a depiction of an illustrative targeted pay-per-view ordering screen in accordance with the present invention.

FIG. 11 is a depiction of an illustrative  
25 targeted set reminder screen in accordance with the present invention.

FIG. 12 is a depiction of an illustrative navigator screen containing a targeted advertisement in accordance with the present invention.

FIG. 13 is a depiction of an illustrative by  
30 channel program listings screen in accordance with the present invention.

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advertisement over a selected program in accordance with the present invention.

FIG. 24 is a depiction of an illustrative targeted advertisement presented in the form of an active object in accordance with the present invention.

FIG. 25 is a flow chart of steps involved in an illustrative approach for displaying relatively small advertisements that the user may select to view additional information in the form of a full-screen video advertisement in accordance with the present invention.

FIG. 26 is a diagram of a data structure that may be used to identify the content of targeted advertisements or actions in accordance with the present invention.

FIG. 27 is a diagram of a data structure that may be used to identify the content of television programs in accordance with the present invention.

FIG. 28 is a flow chart showing steps involved in monitoring which targeted advertisements are displayed to the user and which targeted actions are taken in the program guide in accordance with the present invention.

FIG. 29 is a schematic diagram of a data record of a type suitable for collecting monitoring data in accordance with the present invention.

#### Detailed Description of the Preferred Embodiments

An illustrative program guide system 30 in accordance with the present invention is shown in FIG. 1. Main facility 32 contains a program guide database 34 for storing program guide information such

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includes text, graphics, and video advertisements for various products and services. If desired, some of the program guide and advertising information may be provided using data sources at facilities other than  
5 main facility 32. For example, data related to pay program order processing (e.g., billing data and the like) may be generated by an order processing and billing system that is separate from main facility 32 and separate from television distribution facility 38.  
10 Similarly, advertising information may be generated by an advertising facility that is separate from main facility 32 and television distribution facility 38.

Regardless of its source, advertising information may be maintained on a server 42 within  
15 television distribution facility 38 if desired. Server 42 may be capable of handling text, graphics, and video.

Television distribution facility 38 distributes program guide and advertising information  
20 to the user television equipment 44 of multiple users via communications paths 46. Program guide data may be distributed over an out-of-band channel on paths 46. Advertising information may be distributed using any of a number of suitable techniques. For example, text and  
25 graphics advertisements may be distributed over an out-of-band channel using an out-of-band modulator. Video advertisements may also be distributed in this way, although large quantities of video information may be more efficiently distributed using one or more digital  
30 channels on path 46. Such digital channels may also be used for distributing text and graphics.

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program listings may be displayed on television 52. Each set-top box 48, videocassette recorder 50, and television 52 may be controlled by one or more remote controls 54 or any other suitable user input interface  
5 such as a wireless keyboard, mouse, trackball, dedicated set of buttons, etc.

Communications paths 46 preferably have sufficient bandwidth to allow television distribution facility 38 to distribute scheduled television  
10 programming, pay programming, advertising and other promotional videos, and other video information to set-top boxes 44 in addition to non-video program guide and advertising data. Multiple television and audio channels (analog, digital, or both analog and digital)  
15 may be provided to set-top boxes 48 via communications paths 46. If desired, program listings and advertising information may be distributed by one or more distribution facilities that are similar to but separate from television distribution facility 38 using  
20 communications paths that are separate from communications paths 46.

Certain functions such as pay program purchasing and the remote monitoring of certain users' interactions with the program guide may require set-top  
25 boxes 48 to transmit data to television distribution facility 38 over communications paths 46. If desired, such data may be transmitted over telephone lines or other separate communications paths. If functions such as these are provided using facilities separate from  
30 television distribution facility 38, some of the communications involving set-top boxes 48 may be made directly with the separate facilities.

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more digital channels on paths 46. With such a continuously-looped arrangement, a map indicating the location of the latest graphics information is preferably downloaded periodically to set-top boxes 48 (e.g., once per day). This allows the content on the digital channels to be updated. The program guides on set-top boxes 48 may use the map to locate desired graphics information on the digital channels. Another approach involves using a server such as server 42 or servers 56 (FIG. 2) to provide the graphics information after a set-top box 48 and that server have negotiated to set up a download operation. A bitmap or other suitable set of graphics information may then be downloaded from the server to the set-top box. If desired, the server may download instructions informing the set-top box where the desired graphics information can be located on a particular digital channel. The graphics information can be updated periodically if the server that is responsible for downloading the instructions for informing the set-top box of the location of the graphics information is also updated periodically.

Text information for advertisements may be provided to set-top boxes 48 using the same paths that are used for distributing program guide data. For example, advertising data from database 36 of FIG. 1 may be provided to set-top boxes 48 using link 40, television distribution facility 38, and paths 46. The text information may be stored locally in set-top boxes 48 and updated periodically (e.g., once per day).

Text information, graphics information, and videos for advertisements may also be distributed using



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The steps of FIG. 3 are preferably performed by the program guide implemented on each of set-top boxes 48 in FIG. 1. Certain functions (particularly the display of graphics or videos) may also involve the use of resources located at main facility 32 and television distribution facility 38 and other such facilities. If desired, some of the steps of FIG. 3 may be performed using an application running on set-top boxes 48 other than the interactive program guide.

For clarity, the principles of the invention are described in the context of an arrangement in which the set-top-based steps of FIG. 3 are performed primarily using an interactive program guide.

In addition to performing the steps of FIG. 3, a suitable interactive program guide typically provides various features for displaying television program listings information to the user. For example, if the user presses the appropriate buttons on remote control 54, the user may be presented with a time-ordered or channel-ordered grid or table of program guide listings, etc.

An example of a program guide feature that may be used for browsing television program listings one at a time is shown in FIG. 4. The user watches television (e.g., channel 9 in the example of FIG. 4) on television display screen 66. When the user presses a suitable button on remote control 54 of FIG. 1 (e.g., an up or down cursor key), browse display region 68 is presented. Browse display region 68 contains information on available television programs. In the example of FIG. 4, browse display region 68 indicates that the program "Holiday Entertaining" is scheduled to

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reminder screen 72 is canceled. Set reminder screen 72 may contain an advertisement 82 having content that is targeted to the user based on the user's interactions with the program guide. Set reminder screen 72 and  
5 other such screens in the program guide may use either a full-screen or partial-screen display format.

A short while before the scheduled broadcast time of the program for which a reminder has been set, the program guide displays a reminder display region 84  
10 on reminder screen 85, as shown in FIG. 6. Reminder display region 84 may be displayed over the currently displayed television channel (e.g., channel 9). In the example of FIG. 6, two reminders were set for the 10:00 AM time slot. As a result, reminder display region 84  
15 contains program listings for both selected programs.

The user may automatically tune to one of the selected programs by moving highlight region 86 from hide reminders option 88 to program listing 90 or program listing 92. When the user presses the "OK" button,  
20 set-top box 48 tunes to the channel of the selected program. If the user selects hide reminders option 88, reminder display region 84 is hidden from view. Reminder display region 84 may contain an advertisement 94 that is targeted to the user based on the user's  
25 interests as determined from the user's interactions with the program guide.

A program guide display feature that allows a user to review program listings for multiple channels for a particular broadcast time is the "by time"  
30 listings feature. If the user opts to view program listings arranged by time (e.g., by pressing the appropriate buttons to navigate through various menu

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by placing highlight region 122 on top of the desired option and pressing "OK." Pay-per-view ordering screen 106 may contain an advertisement 124 that is targeted to the user based on the user's interests as determined  
5 from the user's interactions with the program guide.

After the user selects a desired broadcast time from pay-per-view ordering screen 106 of FIG. 7, order review screen 126 of FIG. 9 is presented. Order review screen 126 provides the user with information on  
10 the program and its selected broadcast time and allows the user to cancel (with option 128) or confirm (with option 130) the order. If the order is confirmed, the selected pay-per-view program will be provided to the user at the scheduled broadcast time. Order review  
15 screen 126 may contain an advertisement 132 that is targeted to the user based on the user's interests as determined by the user's interactions with the program guide.

If desired, targeted actions may be taken in  
20 the program guide based on a determination of the user's interests from the user's interactions with the program guide. For example, the program guide may offer the user an opportunity to purchase a particular pay-per-view program. If the user's interactions with  
25 the program guide indicate that the user is interested in movies of the same type as the movie "Volcano," a targeted pay-per-view ordering screen such as targeted pay-per-view ordering screen 134 of FIG. 10 may be presented. Screen 134 provides the user with an  
30 opportunity to order the movie "Volcano" by selecting tell me more option 136 with highlight 138. Selecting tell me more option 136 allows additional information

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guide. Every action that the user takes (e.g., every button that is pressed on remote control 54 of FIG. 1 and every corresponding menu option selected by the viewer) may be monitored. The amount of information about the user's interests that the program guide derives from the user's actions depends on the amount of resources it is desired to expend on processing this information. If it is desired to obtain the maximum possible amount of information about the user's interests, every keystroke of the user may be monitored. If such detailed monitoring of the user's actions is too burdensome on the processing capabilities of the program guide, the program guide can be used to monitor a more limited range of the user's actions.

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An example of a type of user interaction with the program guide that may be used to determine the user's interests is the user's interactions with the program guide's navigation features. An illustrative program guide navigator is shown in FIG. 12. When the user invokes the program guide navigator, the program guide displays navigator screen 152. (A targeted advertisement 154 may be displayed if desired.) The navigator contains user-selectable options arranged in columns under various headings 156. For example, under a suitable logo, the user may be presented with program listings arrangement options 158. If the user selects a category option such as movies option 160, sports option 162, children option 164, or uses search function 166 to locate programs based on such category information, the program guide can determine that the user is interested in that particular type of service

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180 to promote a program that is available on the HBO channel based on the knowledge that the user is interested in television programming on the HBO channel from the user's interaction with the by channel program listings on screen 172 of FIG. 13. Program promotion screen 180 may contain program information 182 and a targeted advertisement 184. If the user selects no option 186, program promotion screen 180 may be cancelled. If the user selects yes option 188, the user may be presented with the opportunity to view more information on the program, set a reminder, etc.

Program promotion screen 180 is an example of an arrangement in which the targeted advertising is presented in the form of an active object. When the user selects an active object (e.g., as when selecting options 186 or 188 in FIG. 14 or otherwise clicking on or indicating a desire to invoke the active object), a suitable action may be taken. The type of action taken by the program guide when the active object is selected depends on the nature of the advertisement. For example, if the active object relates to an advertisement for a product, the user may be presented with options for requesting that information be mailed to the user's home, purchasing the product, or viewing additional product information.

As shown in FIG. 15, if the user views information on pay-per-view movies using pay-per-view movie screen 190, the user may use a highlight to select a desired program listing 192 for which more information is to be provided. An information icon 194 may be used to indicate the availability of such additional information.

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a program. Process 208 involves determining whether a user has taken steps toward recording a program. Such steps may be taken by selecting certain program recording menu options presented by the program guide.

5 Process 210 determines whether the user has selected certain categories of programs of interest (e.g., from a navigator menu such as navigator screen 152 of FIG. 12). Process 212 determines whether the user has viewed information on programs that are scheduled to be

10 broadcast at a particular time (e.g., using the by time option of the navigator of FIG. 12). Process 214 determines whether the user has viewed information on programs that are scheduled to be broadcast on a particular channel (e.g., using the by channel option

15 of the navigator of FIG. 12). Process 216 determines whether the user has defined favorites or other preferences indicative of the user's interests. If desired, the program guide may allow each user to establish a profile of various favorite settings and

20 other criteria, as described in commonly-assigned concurrently-filed Ellis et al. U.S. patent application No. 09/034,934, which is hereby incorporated by reference herein. With such an approach, users may establish profiles of preferences

25 such as their favorite channels, preferred genres of programming (sports, comedy, etc.), favorite actors, desired or required ratings, etc. If one of these favorites settings relates to sports, for example, the program guide can use that information to present

30 targeted advertising on sports products or to present the user with an opportunity to purchase a pay-per-view sporting event, etc. The program guide may present

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advertisement 230, may be, for example, an advertisement for a current movie available on a pay-per-view channel or an advertisement on another movie-related subject.

5           If additional information is available for a given movie, the listing for that movie may be provided with an information icon 232. If the user selects a movie for which additional information is available such as movie 234, the user may be presented with a  
10 movie information screen such as movie information screen 236 of FIG. 20. In movie information screen 236, information is presented on the scheduled broadcast times of the movie, the movie title, and a description of the movie. In addition, a targeted  
15 advertisement 238 may be presented. If desired, a targeted video advertisement 240 may be provided to display video clips from the selected movie, related promotional videos, or other suitable videos.

FIG. 21 shows how a targeted advertisement  
20 242 may be presented as part of a pay-per-view movies listings screen 244. It may be desirable for targeted advertisement 242 to contain information on pay-per-view movies, because the user has expressed an interest in such movies by navigating to pay-per-view listings  
25 screen 244. Another suitable targeted advertisement might use information on the user's interest in children's programming to present an advertisement for a children's movie.

If desired, a targeted advertisement 246 may  
30 be displayed over a currently displayed television program 248, as shown in FIG. 22. Such a targeted advertisement may be presented to the user for a fixed

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selects additional information option 264, the user may be provided with additional product information.

A related approach is illustrated in the flow chart of FIG. 25. After the program guide displays a relatively small targeted advertisement on a portion of the user's display screen at step 266, the user may use the remote control to highlight or otherwise select the displayed advertisement at step 268. The program guide then displays an associated full-screen advertisement with video at step 270.

Data structures that may be used to identify the content of targeted advertisements or actions and television programs are shown in FIGS. 26 and 27. As shown in FIG. 26, advertisements or actions such as advertisement or action 272 have associated attribute tags 274, 276, 278, and 280. Channel tags 274 identify which channels relate to the subject matter of advertisement or action 272. For example, if advertisement or action 272 is an advertisement for athletic footwear, channel tags 274 might include the channel identifier information for one or more sports channels. Broadcast time tags 276 identify certain broadcast times which are associated with the subject matter of the advertisement. For example, advertisements for breakfast foods might be associated with time slots in the morning and advertisements for dinner foods might be associated with time slots in the evening. Category tags 278 contain information relating to genres or themes to which the advertisement relates. For example, an advertisement for athletic footwear or a sports-oriented magazine might be associated with the theme "sports" and popcorn might be



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burdensome. The special version of the program guide may be deployed by electronically downloading the new version to selected subscribers, replacing the subscribers' set-top boxes with special preprogrammed  
5 boxes, or any other suitable technique.

At step 292, the program guides collect information on which targeted advertisements are actually displayed on the user's television and which targeted actions are actually taken in the program  
10 guide. The monitoring that takes place during step 292 may occur over a number of days or any other suitable time period. At step 294, each monitoring version of the program guide transmits its information to a central facility (e.g., a facility such as television  
15 distribution facility 38 of FIG. 1, main facility 32 of FIG. 1, or some other such suitable facility). Data may be transmitted to the central facility via the return path in a two-way cable link, via modem link, or via any other suitable communications path. Data may  
20 be transmitted periodically or when a data transfer is requested from the central facility. The information collected at the central facility is analyzed at step 296. The data analysis may reveal, for example, that certain targeted advertisements are more often viewed  
25 than others and that certain targeted program guide actions are taken more often than others. Analysis may also reveal information about the interests of the users.

A data record of a type suitable for  
30 collecting the monitoring data is shown in FIG. 29. Each such monitoring record 298 may contain an advertisement or action identifier 300 that identifies

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What is Claimed is:

1. A system in which an interactive television program guide is implemented on user television equipment comprising:

means for monitoring a user's interactions with the interactive television program guide to determine the user's interests; and

means for presenting targeted advertising to the user with the interactive television program guide based on the user's interests.

2. The system defined in claim 1 wherein the means for presenting further comprises means for presenting targeted advertising that contains text.

~~3. The system defined in claim 1 wherein~~  
the means for presenting further comprises means for presenting targeted advertising that contains graphics.

4. The system defined in claim 1 wherein the means for presenting further comprises means for presenting targeted advertising that contains video.

5. The system defined in claim 1 further comprising a set-top box on which the interactive television program guide is implemented.

6. The system defined in claim 1 further comprising:

a television distribution facility for distributing television programming to the user television equipment; and

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11. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a by time screen that contains a targeted advertisement.

12. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a select start time pay-per-view purchasing screen that contains a targeted advertisement.

13. The system defined in claim 1 wherein the means for presenting further comprises means for displaying an order review screen that contains a targeted advertisement.

~~14. The system defined in claim 1 wherein~~  
the means for presenting further comprises means for displaying a targeted pay-per-view ordering screen that contains a targeted advertisement.

15. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a targeted set reminders screen that contains a targeted advertisement.

16. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a navigator screen that contains a targeted advertisement.

17. The system defined in claim 1 further comprising means for displaying a by channel program

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determining whether the user has purchased a particular program.

24. The system defined in claim 1 wherein the means for monitoring further comprises means for determining whether the user has taken steps toward recording a particular program.

25. The system defined in claim 1 wherein the means for monitoring further comprises means for determining whether the user has selected certain categories of programs of interest.

26. The system defined in claim 1 wherein the means for monitoring further comprises means for ~~determining whether the user has viewed information on~~ programs scheduled to be broadcast at a particular time.

27. The system defined in claim 1 wherein the means for monitoring further comprises means for determining whether the user has viewed information on programs scheduled to be broadcast on a particular channel.

28. The system defined in claim 1 wherein the means for monitoring further comprises means for determining whether the user has defined user preferences in the program guide that are indicative of the user's interests.

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35. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a targeted advertisement over a currently-displayed television program.

36. The system defined in claim 1 further comprising:

means for allowing the user to set a reminder for a program;

means for displaying a targeted advertisement on top of the program for which the reminder was set;

means for providing the user with an opportunity to request additional information related to the displayed targeted advertisement; and

~~means for displaying additional~~  
information related to the displayed targeted advertisement when the user requests more information.

37. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a targeted advertisement that is an active object.

38. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a targeted advertisement to the user that contains targeted product information.

39. The system defined in claim 1 wherein the means for presenting further comprises means for displaying a targeted advertisement to the user that

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45. The system defined in claim 1 further comprising means for providing the targeted advertising with program tags.

46. A method for displaying targeted advertising using an interactive television program guide implemented on user television equipment, comprising the steps of:

monitoring a user's interactions with the interactive television program guide to determine the user's interests; and

presenting targeted advertising to the user with the interactive television program guide based on the user's interests.

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47. ~~The method defined in claim 46 wherein~~  
the step of presenting further comprises the step of presenting targeted advertising that contains text.

48. The method defined in claim 46 wherein the step of presenting further comprises the step of presenting targeted advertising that contains graphics.

49. The method defined in claim 46 wherein the step of presenting further comprises the step of presenting targeted advertising that contains video.

50. The method defined in claim 46 further comprising the step of providing the interactive television program guide using a set-top box.

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55. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a reminders screen that contains a targeted advertisement.

56. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a by time screen that contains a targeted advertisement.

57. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a select start time pay-per-view purchasing screen that contains a targeted advertisement.

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~~58. The method defined in claim 46 wherein~~  
the step of presenting further comprises the step of displaying an order review screen that contains a targeted advertisement.

59. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a targeted pay-per-view ordering screen that contains a targeted advertisement.

60. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a targeted set reminders screen that contains a targeted advertisement.

61. The method defined in claim 46 wherein the step of presenting further comprises the step of

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determining whether the user has taken steps toward purchasing a particular program.

68. The method defined in claim 46 wherein the step of monitoring further comprises the step of determining whether the user has purchased a particular program.

69. The method defined in claim 46 wherein the step of monitoring further comprises the step of determining whether the user has taken steps toward recording a particular program.

70. The method defined in claim 46 wherein the step of monitoring further comprises the step of ~~determining whether the user has selected certain~~ categories of programs of interest.

71. The method defined in claim 46 wherein the step of monitoring further comprises the step of determining whether the user has viewed information on programs scheduled to be broadcast at a particular time.

72. The method defined in claim 46 wherein the step of monitoring further comprises the step of determining whether the user has viewed information on programs scheduled to be broadcast on a particular channel.

73. The method defined in claim 46 wherein the step of monitoring further comprises the step of



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presenting a pay-per-view movies listings screen that contains a targeted advertisement.

80. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a targeted advertisement over a currently-displayed television program.

81. The method defined in claim 46 further comprising the steps of:

allowing the user to set a reminder for a program;

displaying a targeted advertisement on top of the program for which the reminder was set;

providing the user with an opportunity to request additional information related to the displayed targeted advertisement; and

displaying additional information related to the displayed targeted advertisement when the user requests more information.

82. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a targeted advertisement that is an active object.

83. The method defined in claim 46 wherein the step of presenting further comprises the step of displaying a targeted advertisement to the user that contains targeted product information.

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89. The method defined in claim 46 further comprising the step of providing the targeted advertising with broadcast time tags.

90. The method defined in claim 46 further comprising the step of providing the targeted advertising with program tags.

91. A system in which an interactive television program guide is implemented on user television equipment, comprising:

means for monitoring a user's interactions with the interactive television program guide to determine the user's interests; and

means for taking a targeted action in the interactive television program guide based on those interests.

92. The system defined in claim 91 wherein the means for taking the targeted action further comprises means for automatically setting a program reminder based on the user's interests.

93. The system defined in claim 91 wherein the means for taking the targeted action further comprises means for automatically presenting the user with an opportunity to set a program reminder that is based on the user's interests.

94. The system defined in claim 91 wherein the means for taking the targeted action further comprises means for offering a pay-per-view event for

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99. A system in which an interactive television program guide is implemented on user television equipment, comprising:

means for monitoring a user's interactions with the interactive television program guide to determine the user's interests; and

means for displaying targeted advertising based on the user's interests with the program guide; and

means for monitoring which advertisements are displayed by the program guide; and

means for transmitting information on which advertisements are displayed to a central facility.

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100. ~~The system defined in claim 99 further~~ comprising means for maintaining a monitoring record containing information on which advertisements are displayed.

101. The system defined in claim 100 wherein the means for maintaining the monitoring record further comprises means for maintaining an advertisement identifier that identifies each targeted advertisement that is displayed in the monitoring record.

102. The system defined in claim 100 wherein the means for maintaining the monitoring record further comprises means for maintaining information on the date and time of the display of each targeted advertisement in the monitoring record.

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107. The method defined in claim 106 wherein the step of maintaining the monitoring record further comprises the step of maintaining an advertisement identifier that identifies each targeted advertisement that is displayed in the monitoring record.

108. The method defined in claim 106 wherein the step of maintaining the monitoring record further comprises the step of maintaining information on the date and time of the display of each targeted advertisement in the monitoring record.

109. The method defined in claim 106 wherein the step of maintaining the monitoring record further comprises the step of maintaining information on the ~~location in the program guide in which each targeted~~ advertisement is displayed in the monitoring record.

110. The method defined in claim 106 wherein the step of maintaining the monitoring record further comprises the step of maintaining information on the reasons that each targeted advertisement was displayed by the program guide in the monitoring record.

111. A system in which an interactive television program guide is implemented on user television equipment, comprising:

means for monitoring a user's interactions with the interactive television program guide to determine the user's interests;

means for taking targeted actions in the program guide based on the user's interests;

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reasons that each targeted action was taken in the monitoring record.

117. A method for using an interactive television program guide implemented on user television equipment, comprising the steps of:

monitoring a user's interactions with the interactive television program guide to determine the user's interests;

taking targeted actions in the program guide based on the user's interests;

monitoring which targeted actions are taken in the program guide based on the user's interest; and

transmitting information on which targeted actions are taken to a central facility.

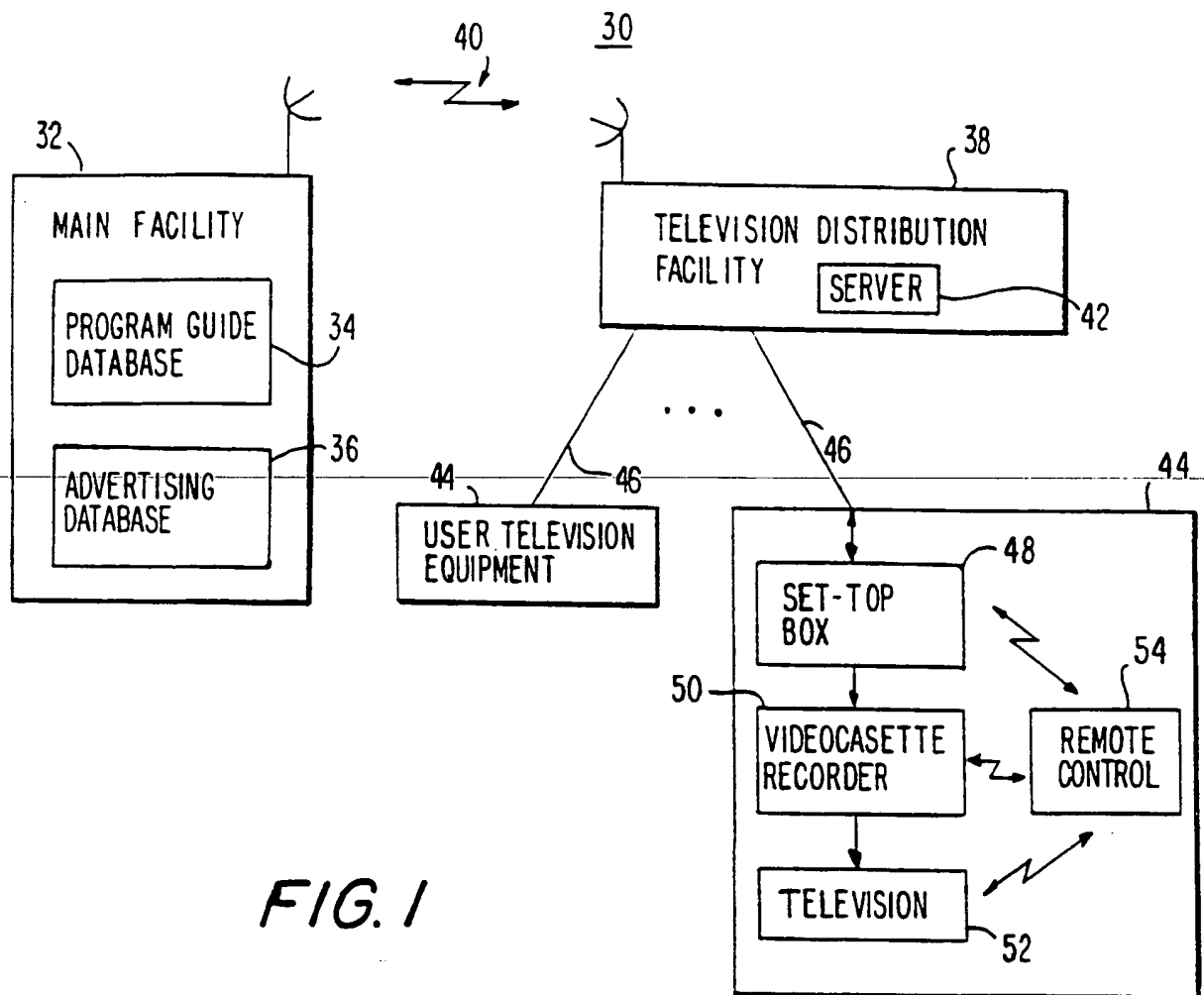
---

118. The method defined in claim 117 further comprising the step of maintaining a monitoring record containing information on which targeted actions are taken.

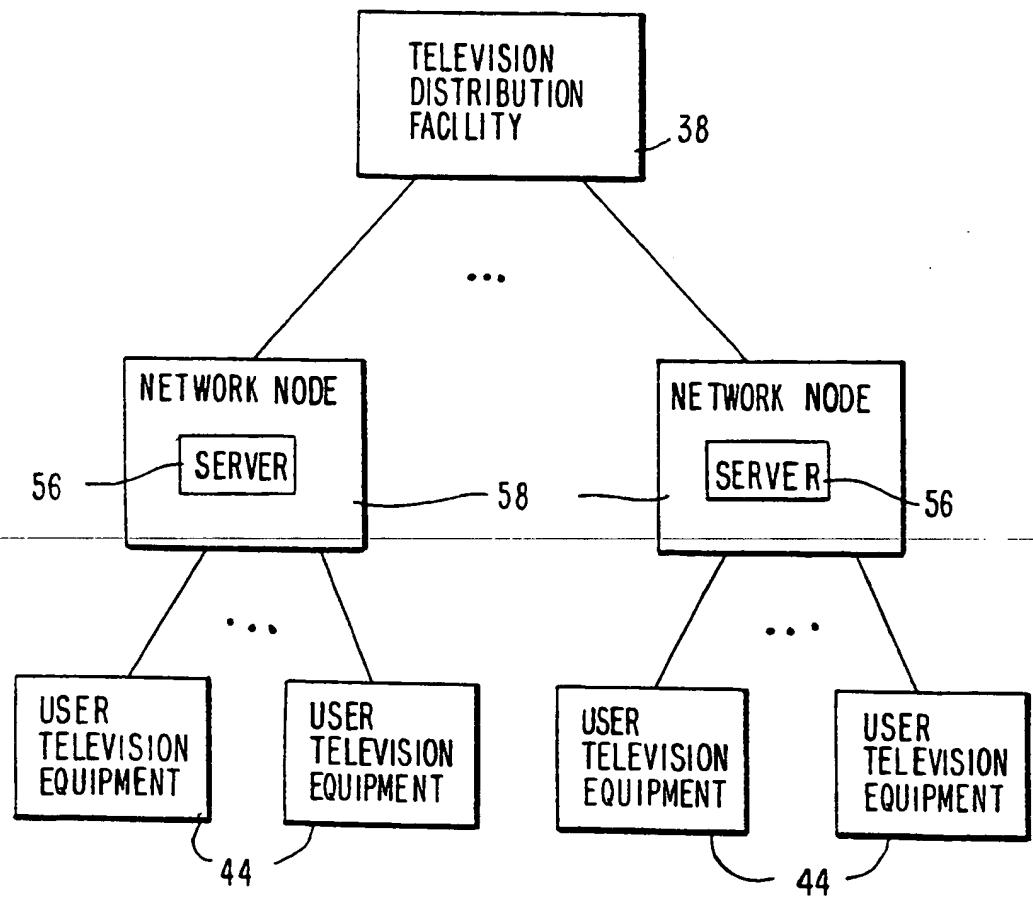
119. The method defined in claim 118 wherein the step of maintaining the monitoring record further comprises the step of maintaining in the monitoring record an identifier that identifies each targeted action taken.

120. The method defined in claim 118 wherein the step of maintaining the monitoring record further comprises the step of maintaining information in the

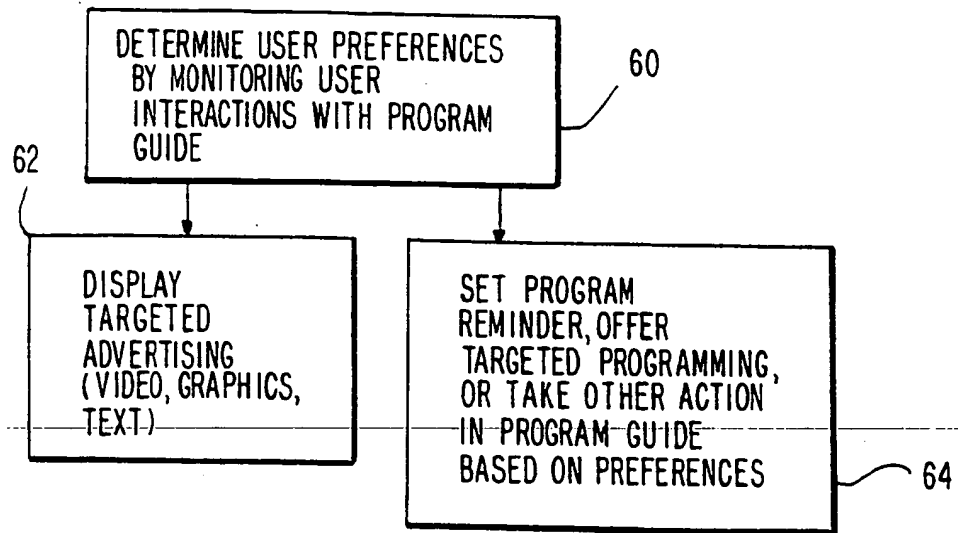
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*FIG. 2*

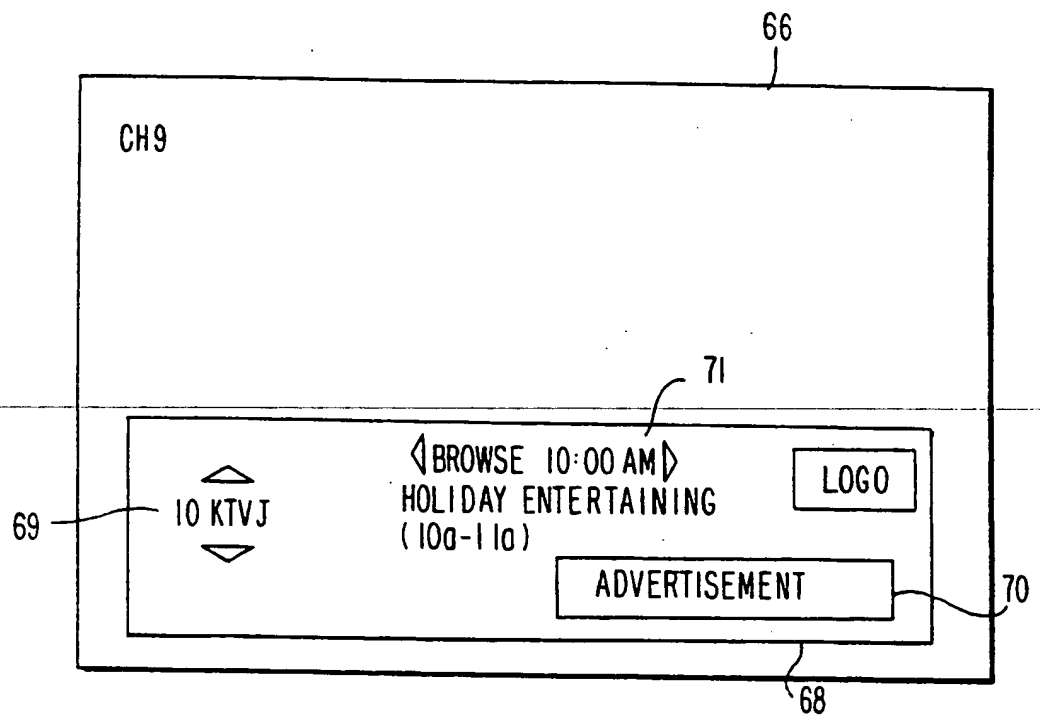
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*FIG. 3*



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FIG. 4



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SET REMINDER

WOULD YOU LIKE TO SET A REMINDER FOR THIS PROGRAM ?

10 KTVK	HOLIDAY ENTERTAINING	10-11a
---------	----------------------	--------

78  
76 YES 76 NO 80

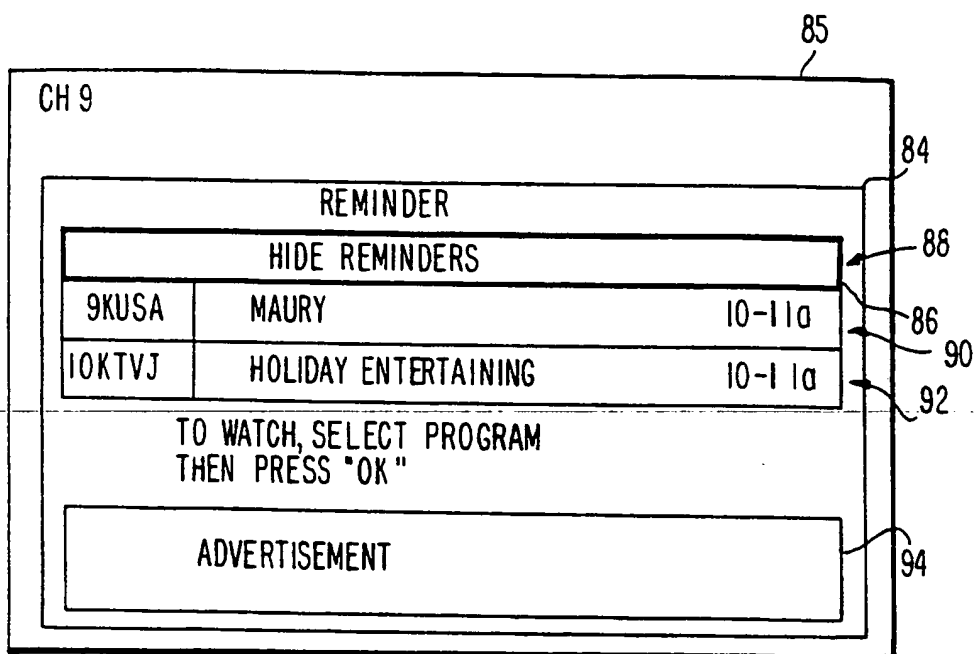
ADVERTISEMENT

72  
74  
82

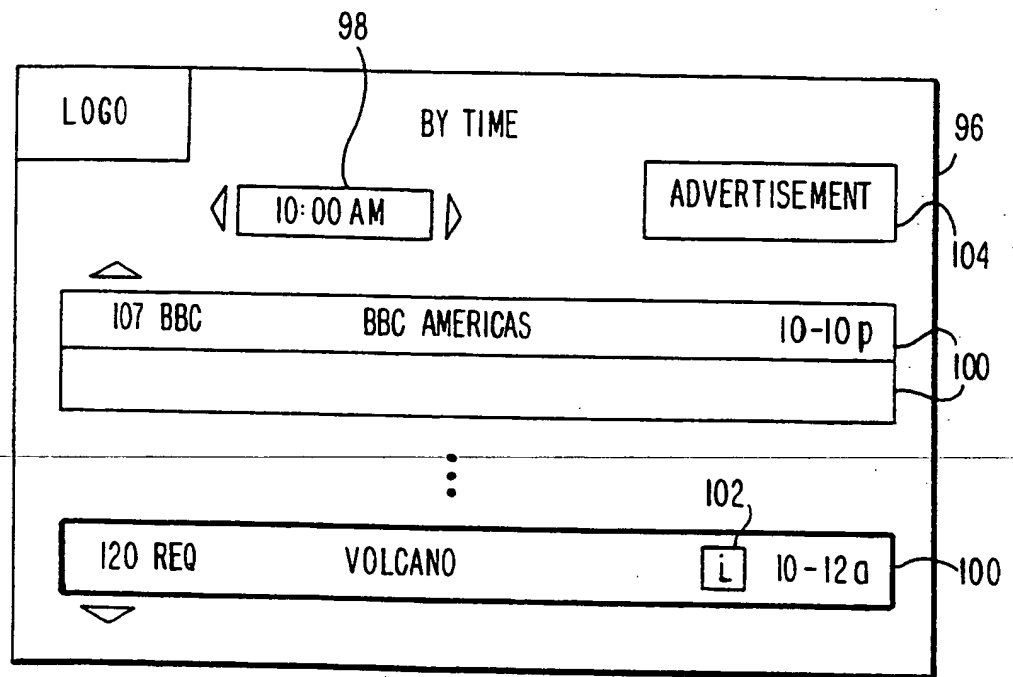
Detailed description: The figure shows a rectangular frame containing a 'SET REMINDER' section. At the top, the text 'SET REMINDER' is centered. Below it is the question 'WOULD YOU LIKE TO SET A REMINDER FOR THIS PROGRAM ?'. Under the question is a table with three columns: '10 KTVK', 'HOLIDAY ENTERTAINING', and '10-11a'. Below the table are two buttons, 'YES' and 'NO', with a double arrow between them. The 'YES' button is labeled with '76' and '78'. The 'NO' button is labeled with '80'. At the bottom of the frame is a box labeled 'ADVERTISEMENT'. On the right side of the frame, there are three reference numerals: '72' pointing to the right edge, '74' pointing to the table, and '82' pointing to the advertisement box.

FIG. 5

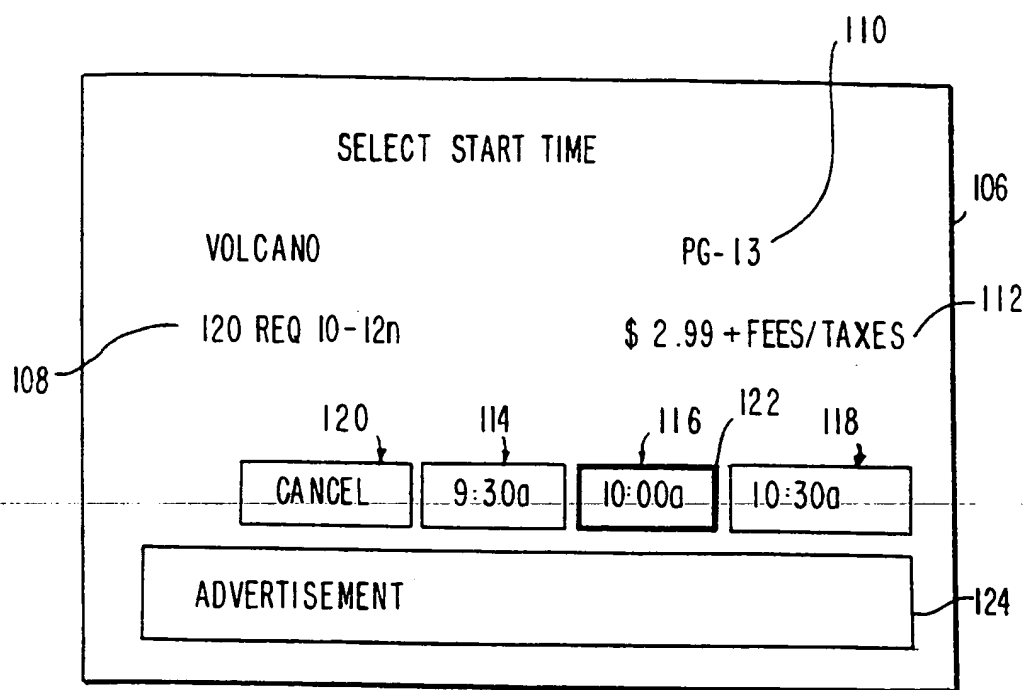
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*FIG. 6*

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*FIG. 7*

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ORDER REVIEW

VOLCANO PG-13

185 REQ 10:30a \$ 2.99 + FEES / TAXES

130 128

CONFIRM <> CANCEL

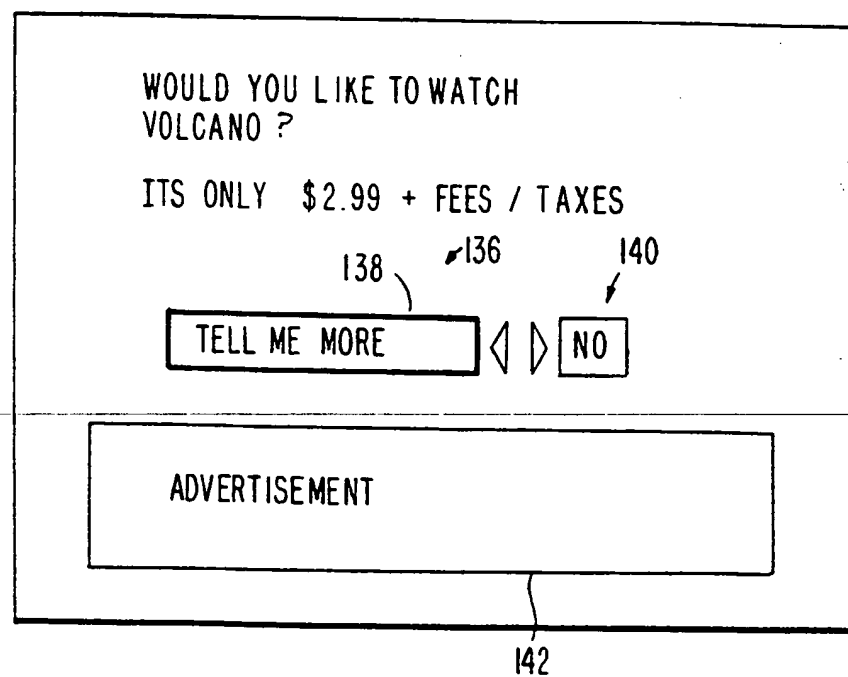
ADVERTISEMENT 132

126

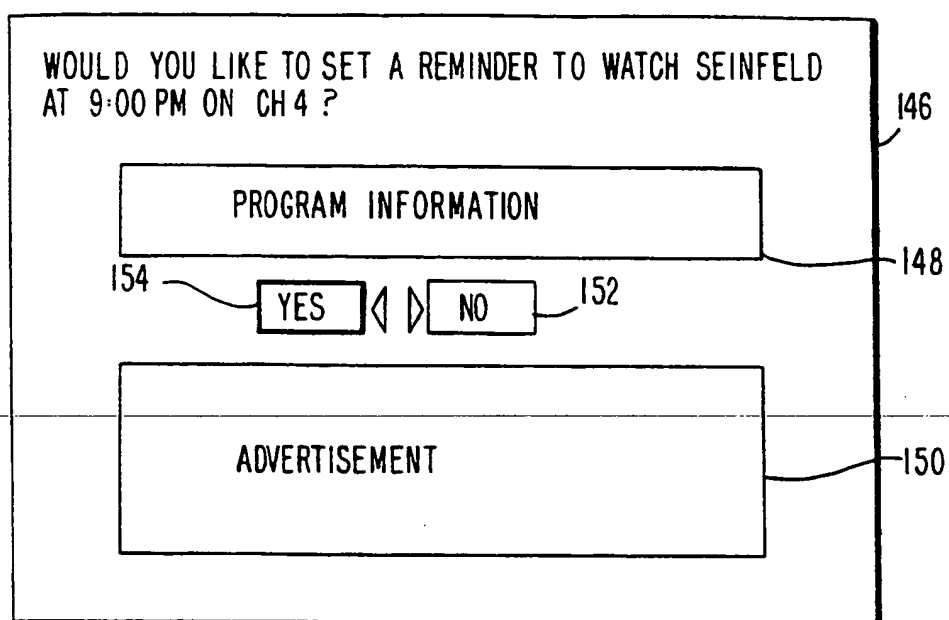
Detailed description: This is a schematic diagram of an 'ORDER REVIEW' screen. The screen is enclosed in a rectangular border. At the top center is the title 'ORDER REVIEW'. Below it, on the left, is the text 'VOLCANO' and on the right is 'PG-13'. The next line contains '185 REQ', '10:30a', and '\$ 2.99 + FEES / TAXES'. Below this line, there are two buttons: 'CONFIRM' on the left and 'CANCEL' on the right, separated by a double-headed arrow. A label '130' points to the 'CONFIRM' button, and a label '128' points to the 'CANCEL' button. At the bottom of the screen is a wide rectangular box labeled 'ADVERTISEMENT'. A label '132' points to the right side of this box. On the far right edge of the screen, there is a label '126' pointing to the vertical border.

FIG. 9

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*FIG. 10*

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*FIG. 11*



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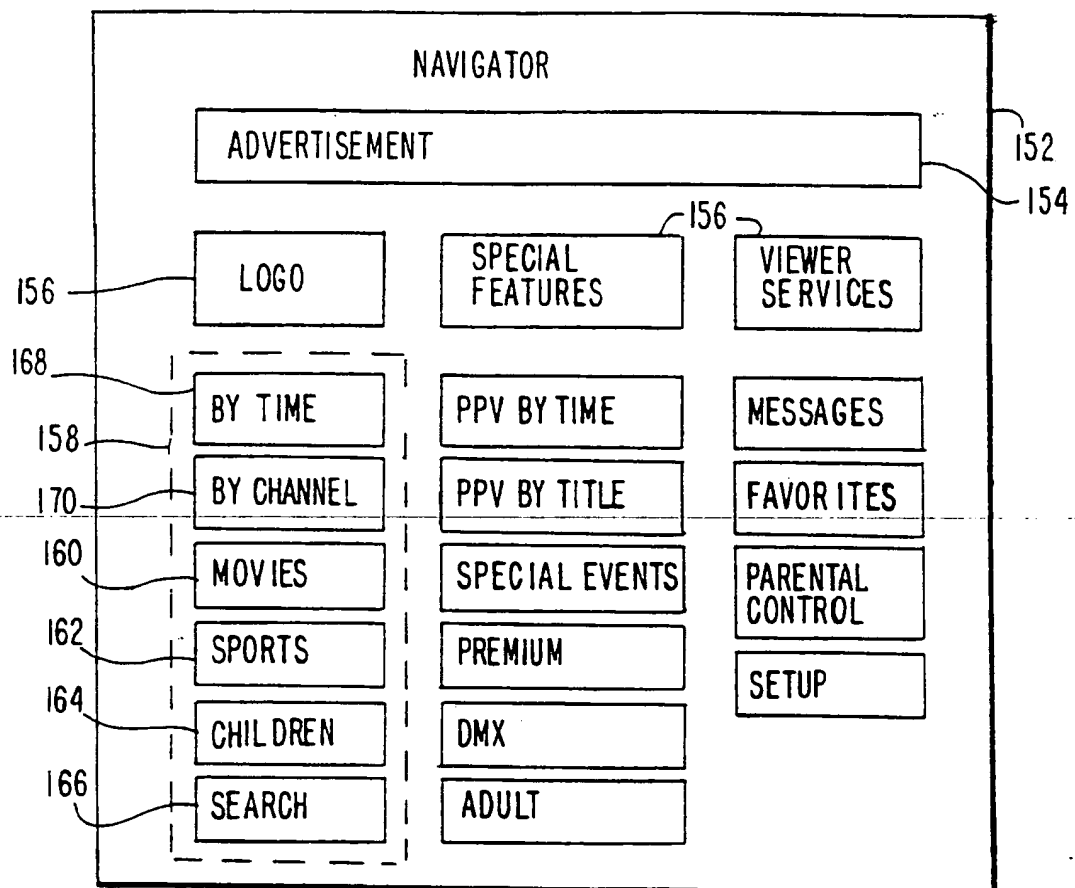


FIG. 12

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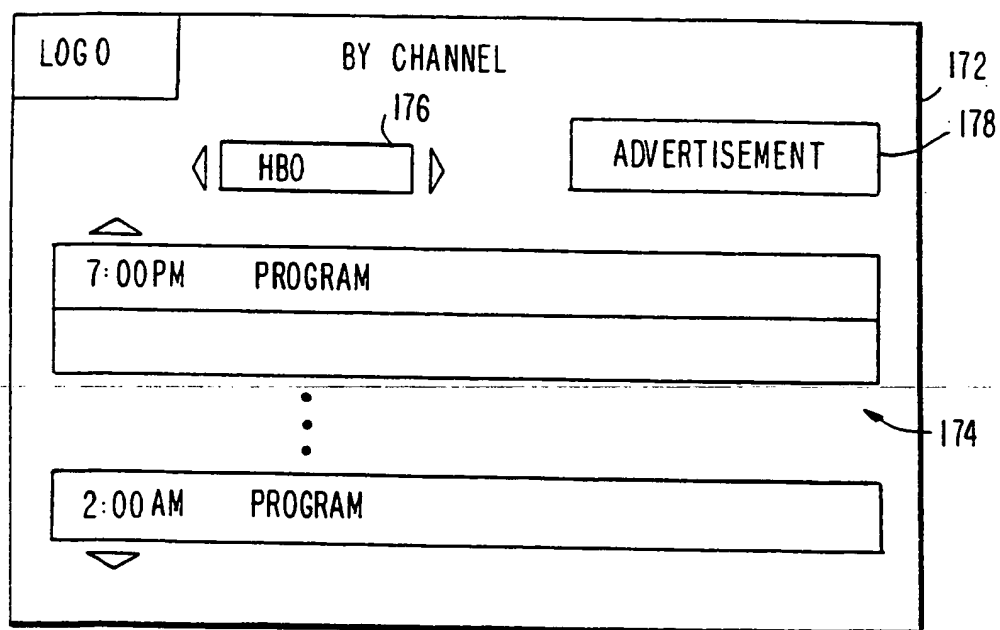
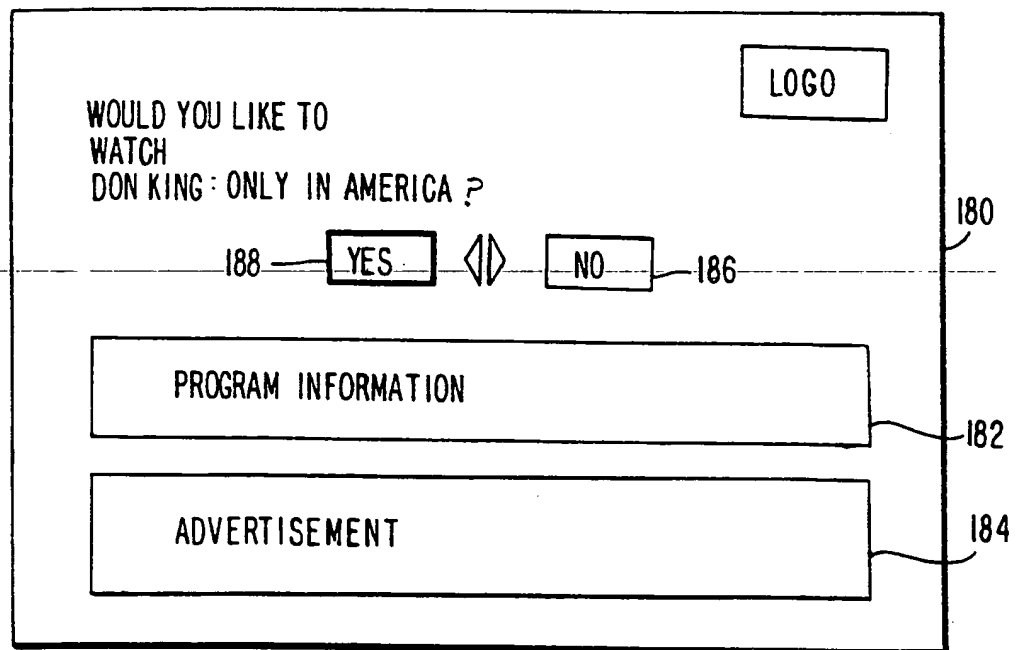


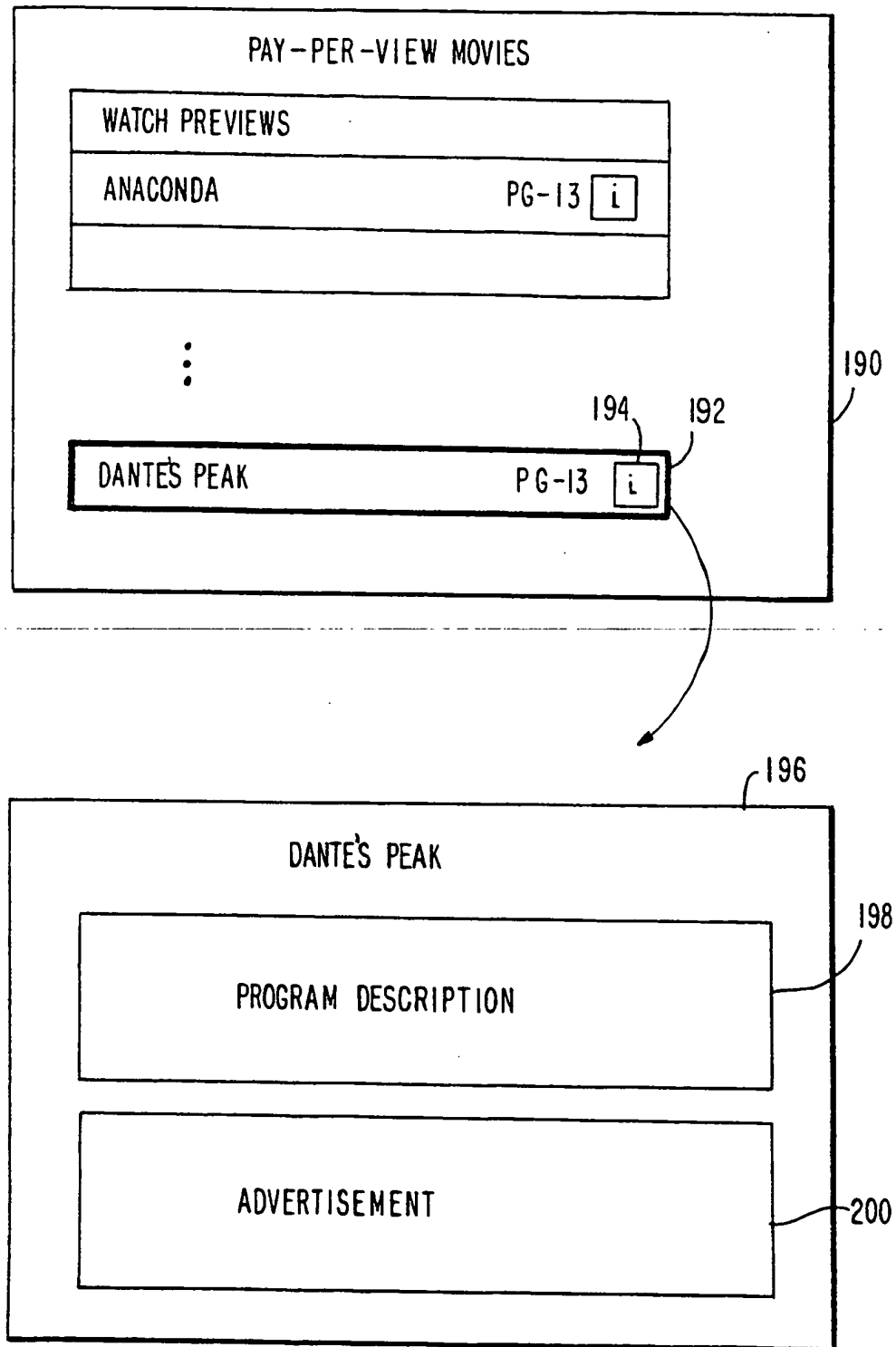
FIG. 13

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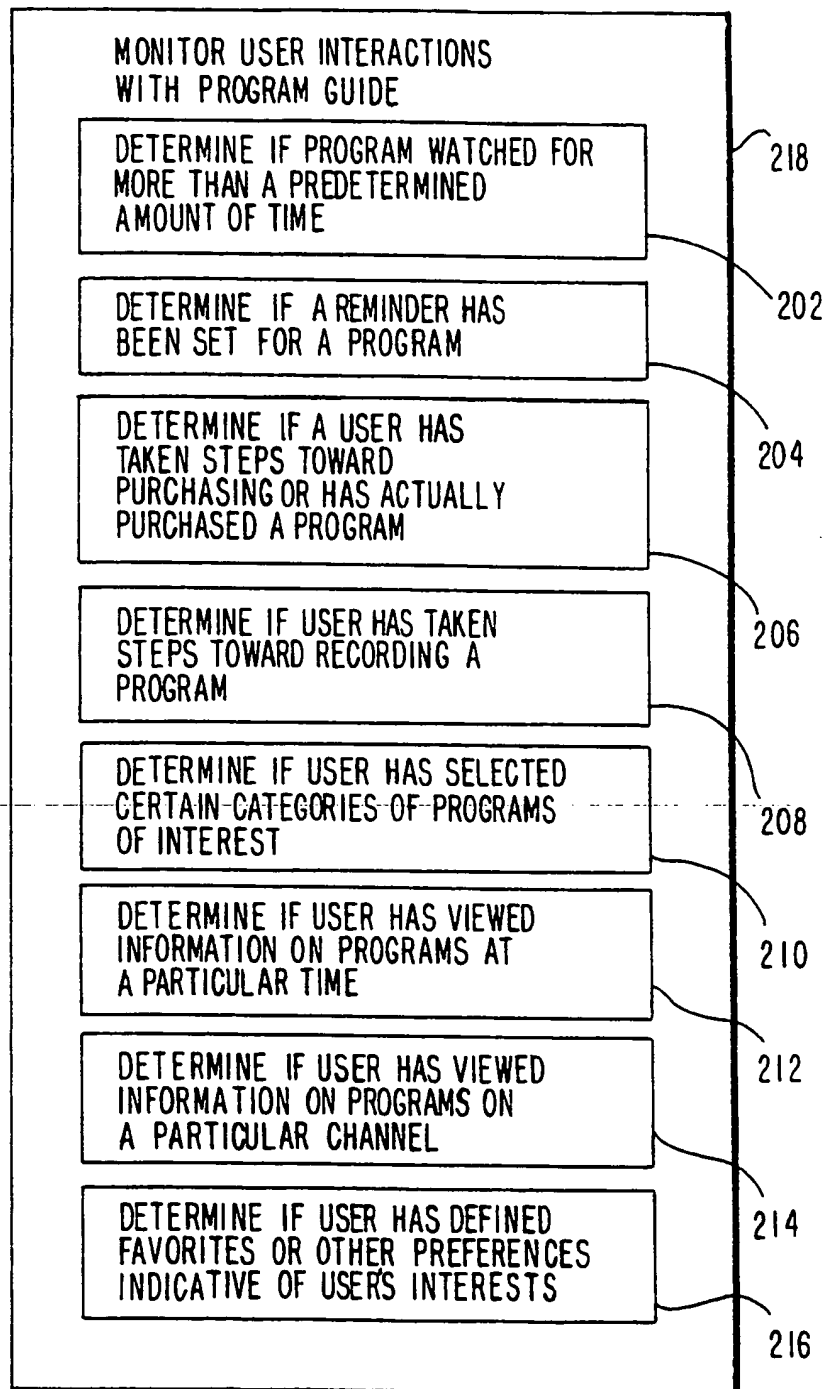
FIG. 14



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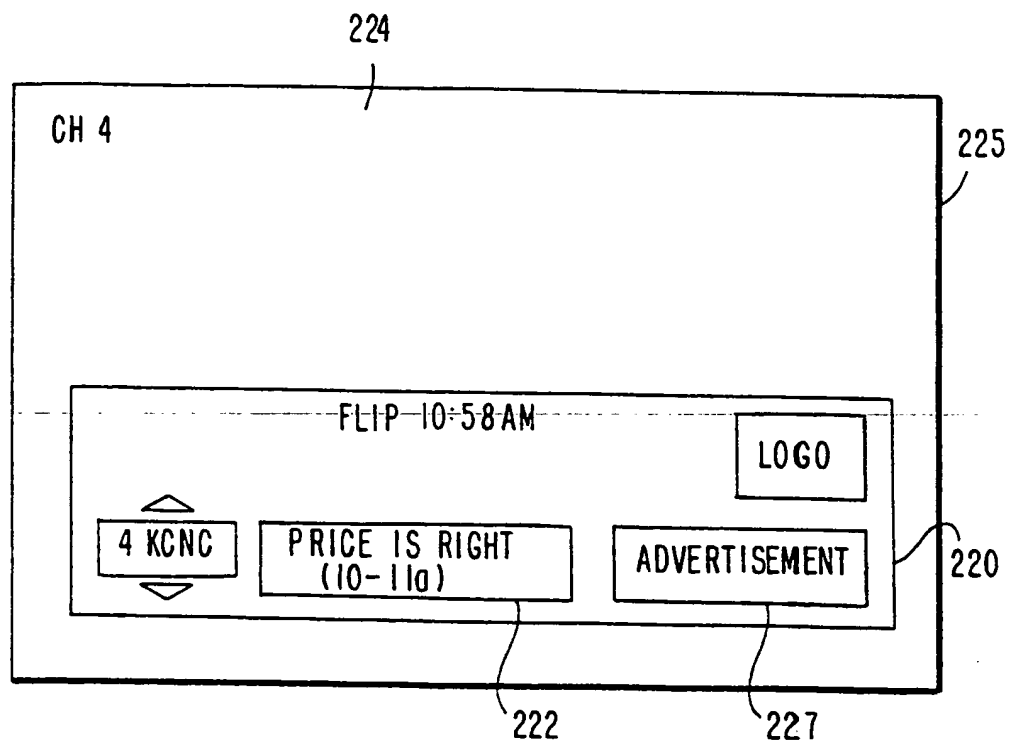
*FIG. 15*

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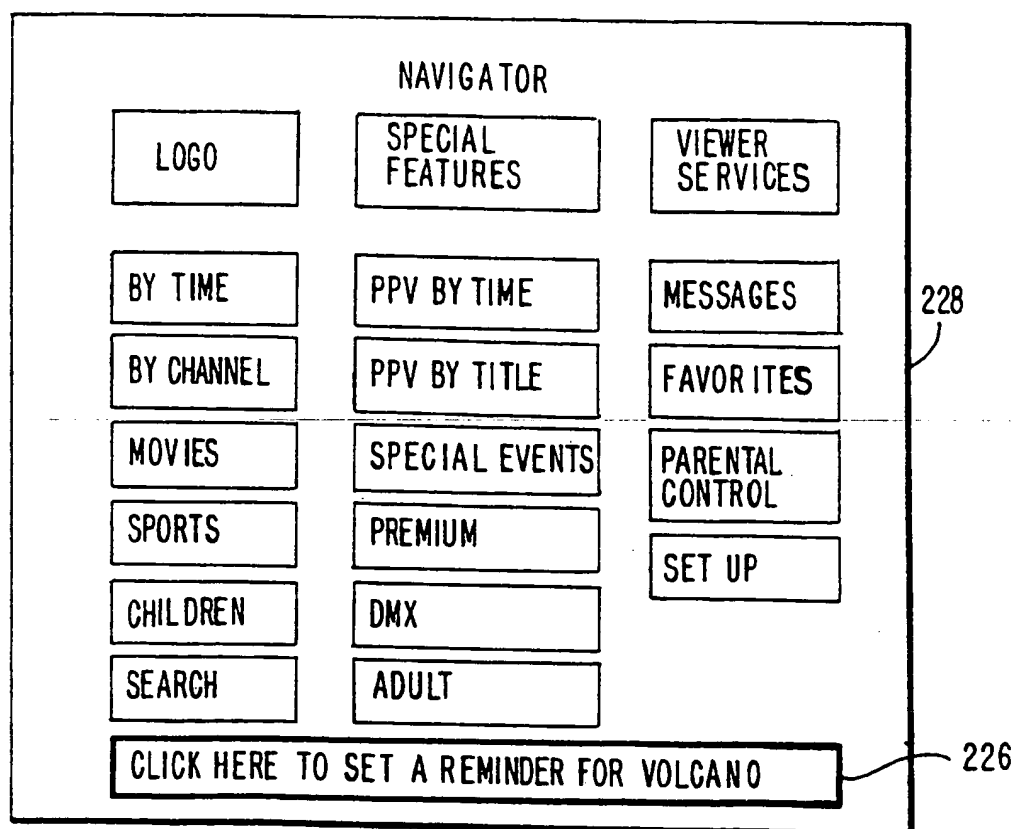
*FIG. 16*

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FIG. 17



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*FIG. 18*

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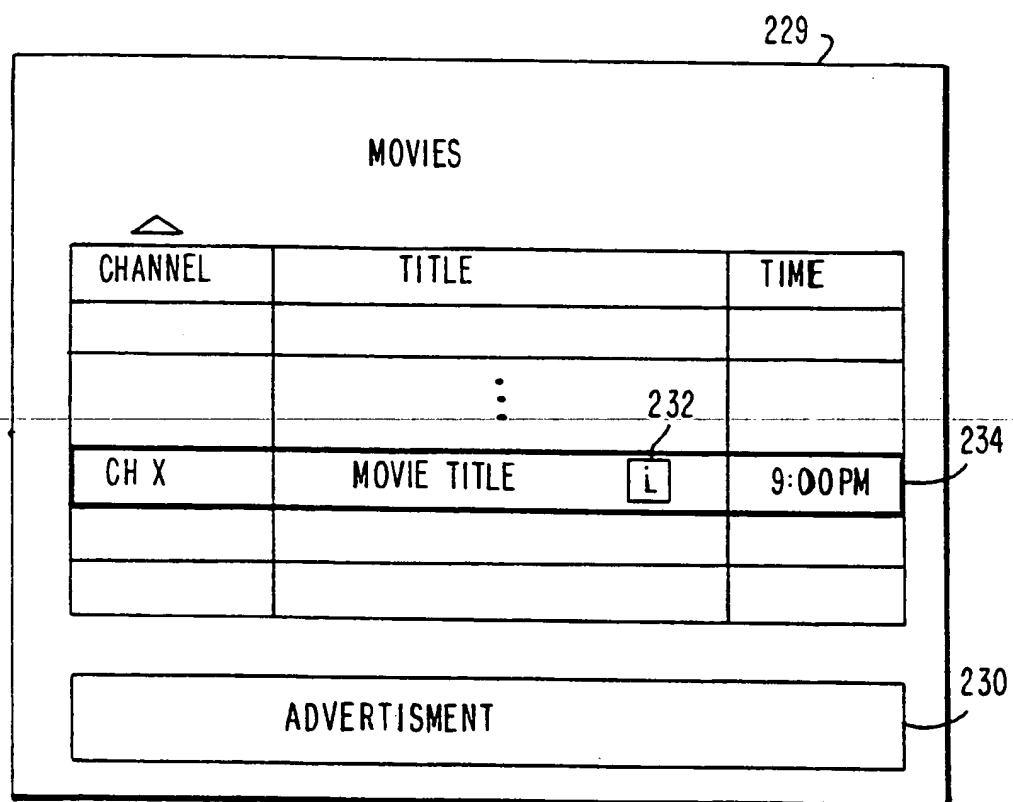
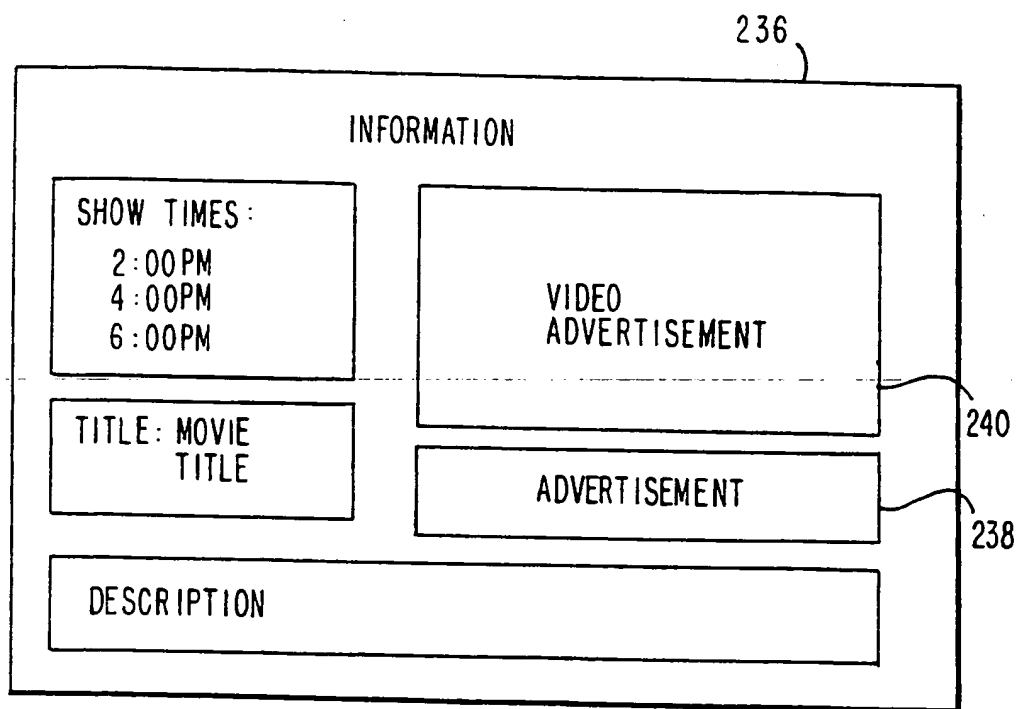


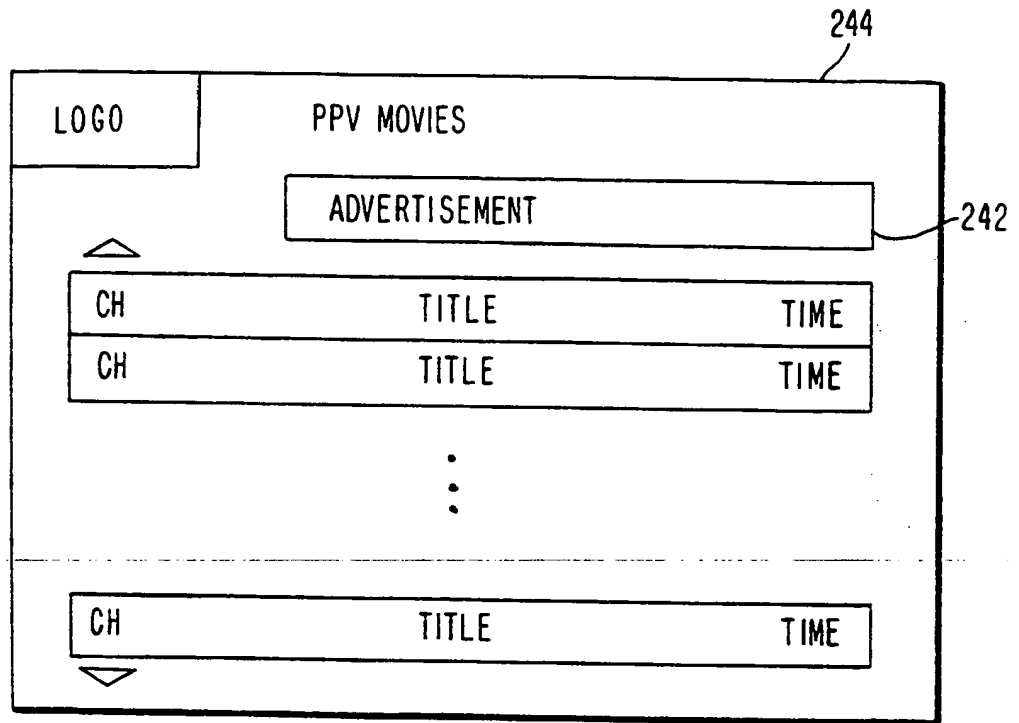
FIG. 19



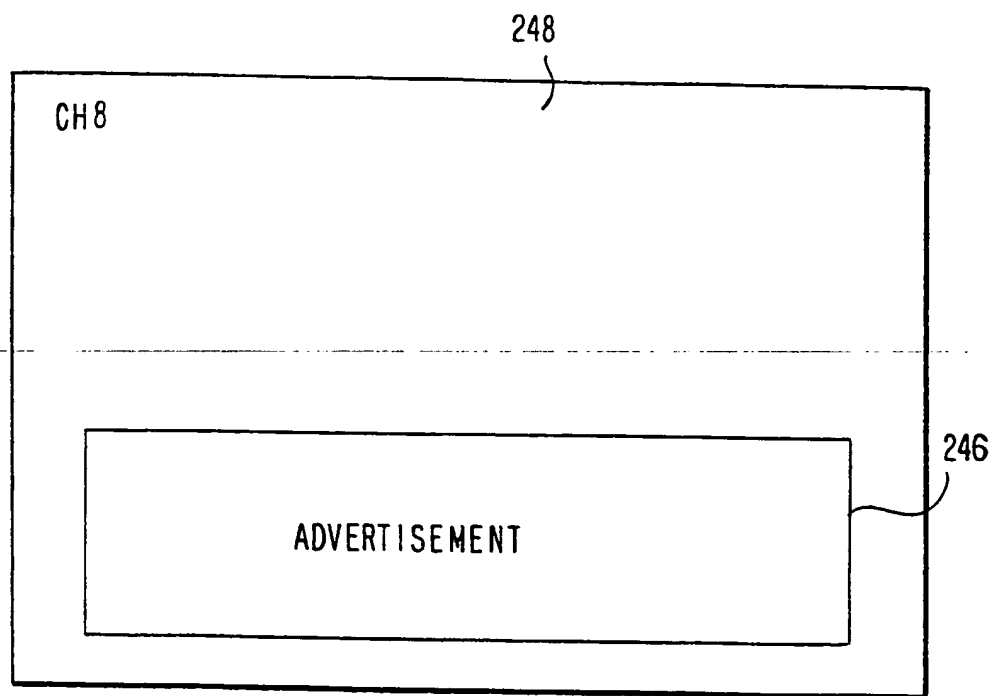
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*FIG. 20*

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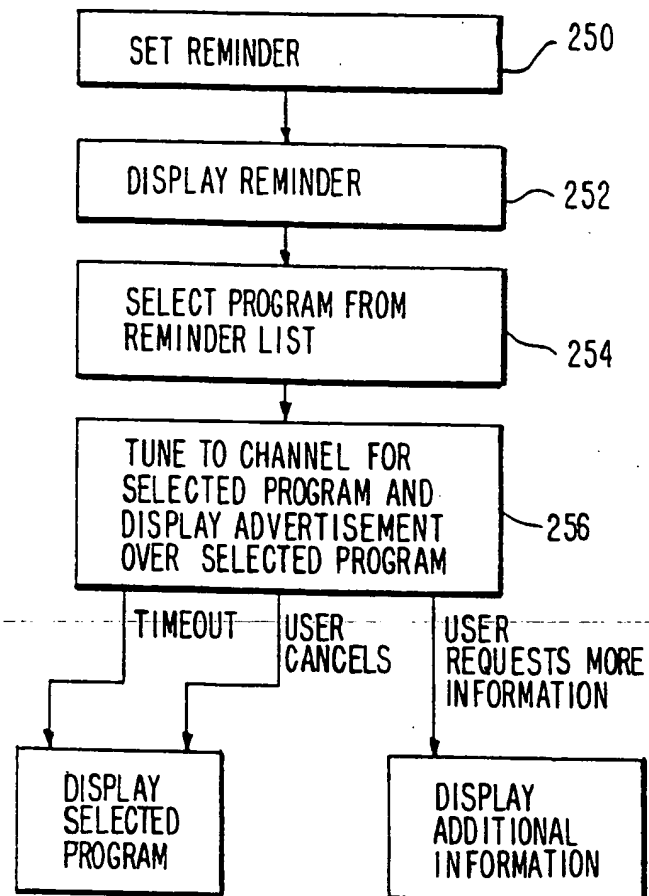
*FIG. 21*

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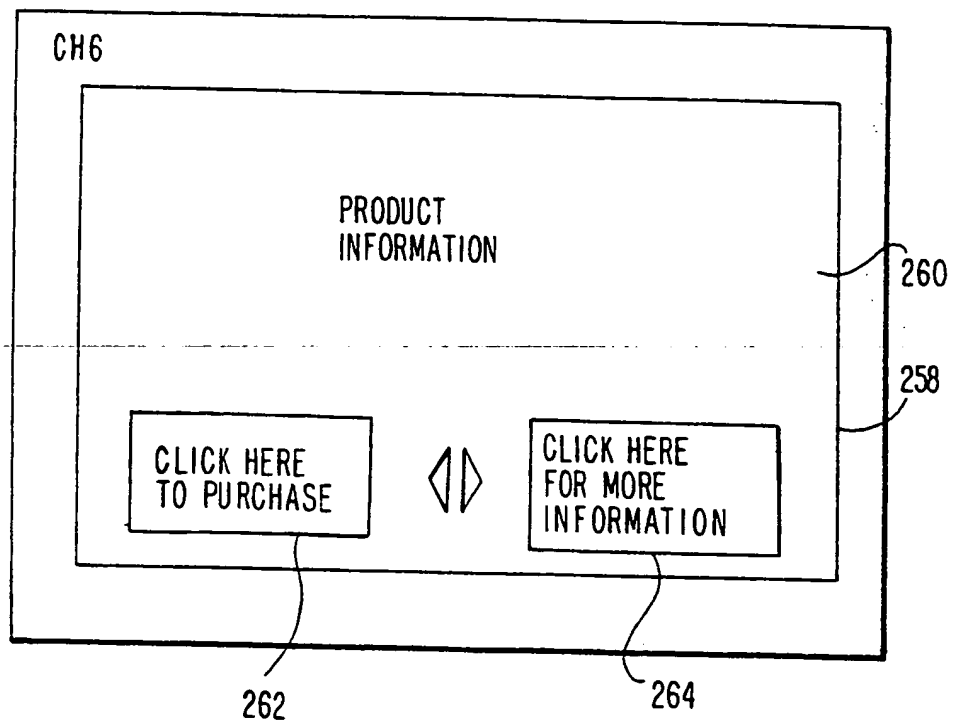


*FIG. 22*

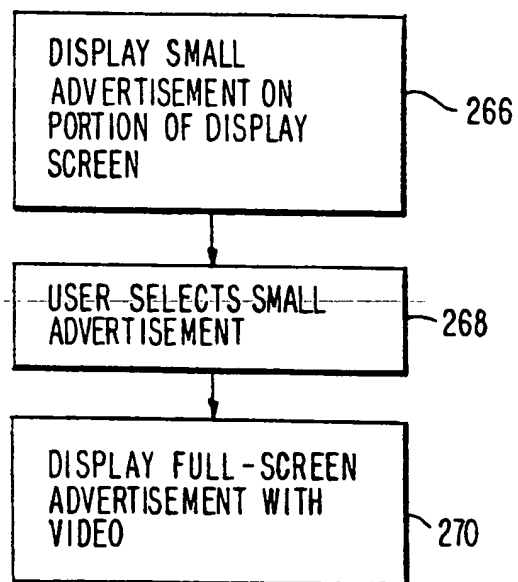
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*FIG. 23*

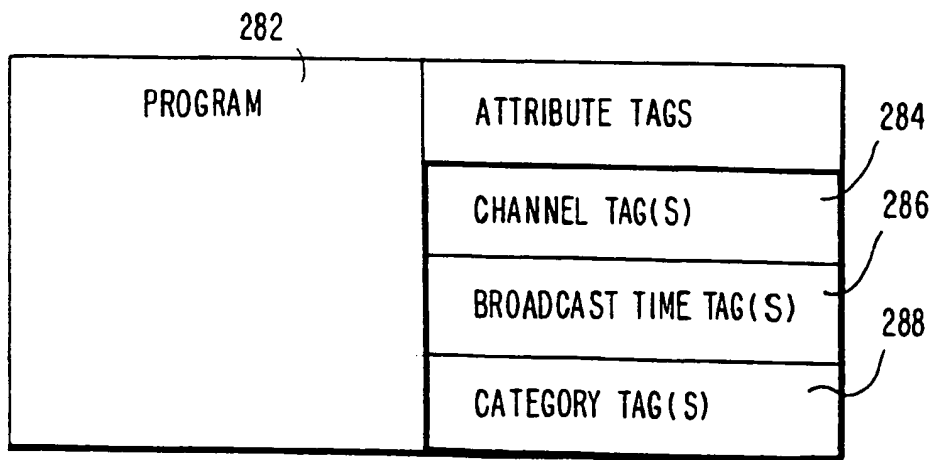
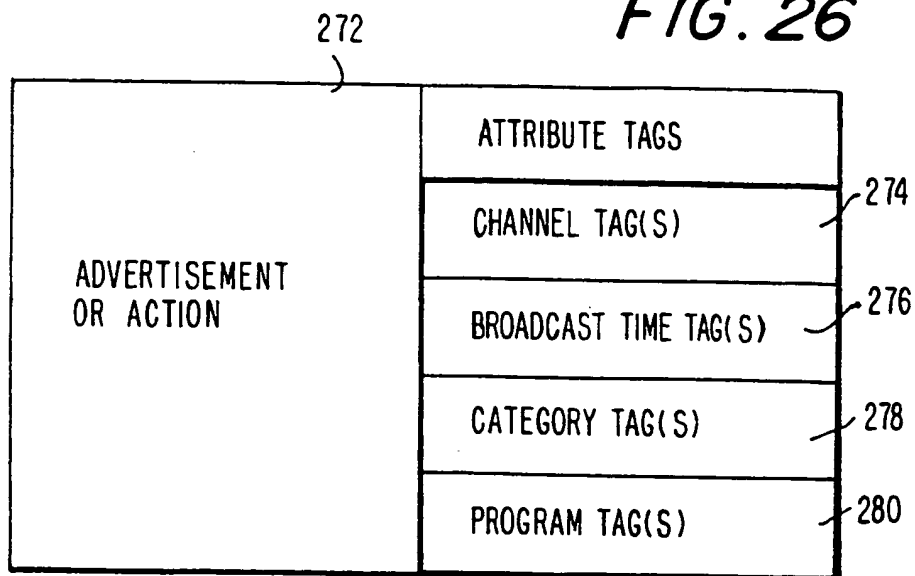
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*FIG. 24*

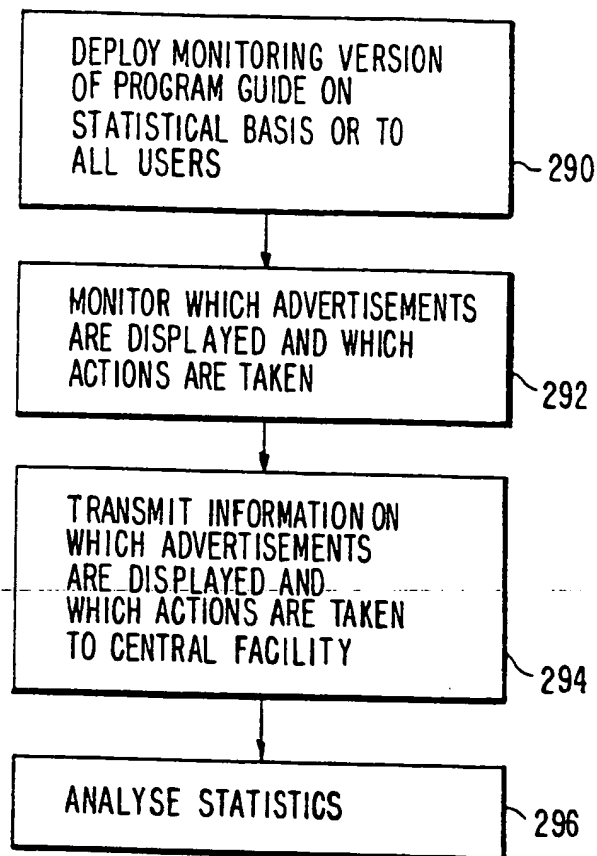
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*FIG. 25*

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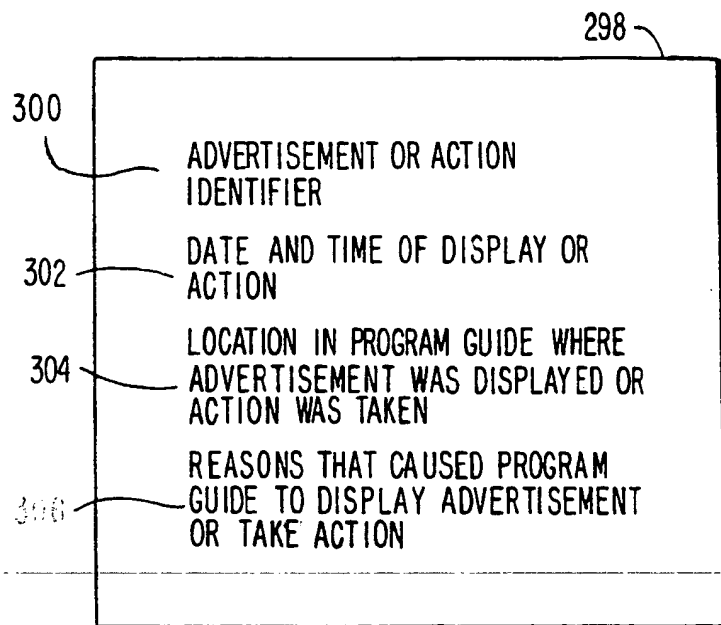
*FIG. 26**FIG. 27*

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*FIG. 28*



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*FIG. 29*

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/04163

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			EP 0823179 A	11-02-1998
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